

What is claimed is:

1. An electrochemical cell component comprising:
 - (a) a gas diffusion layer comprising a porous body; and
 - (b) an electroconductive separator plate comprising at least one landing surface formed on a surface of the separator plate, and the separator plate and landing surface comprising a polymer and conductive filler,wherein the gas diffusion layer is joined to the separator plate by impregnating some of the polymer on the landing surface within a portion of the porous body.
2. The electrochemical cell component of claim 1, wherein the gas diffusion layer is joined to the separator plate by using a welding technique selected from the group consisting of: resistance welding, vibrational welding, ultrasonic welding, laser welding, heat lamination, and hot bonding techniques.
3. The electrochemical cell component of claim 2, wherein the welding technique is resistance welding.
4. The electrochemical cell component of any one of claims 1 to 3, wherein the polymer is a thermoplastic polymer selected from the group consisting of melt processible polymers, partially fluorinated polymers, thermoplastic elastomers, liquid crystalline polymers, polyolefins, polyamides, aromatic condensation polymers, and mixtures thereof.
5. The electrochemical cell component of claim 4, wherein the polymer is a blend of about 1 wt% to about 30 wt%, preferably about 5 wt% to about 25 wt%, of maleic anhydride modified polymer with the thermoplastic polymer, partially fluorinated polymers and liquid crystalline polymer or mixtures thereof.

6. The electrochemical cell component of any one of claims 1-5, wherein the conductive filler is graphite fiber and graphite powder.
7. The electrochemical cell component of any one of claims 1-6, further comprising a polymer rich layer on the top surface of the landing surface.
8. The electrochemical cell component of claim 7, wherein the polymer rich layer comprises between about 25 wt% and about 100 wt% polymer, preferably between about 50 wt% and about 100 wt% polymer, and most preferably about 100 wt% polymer.
9. An electrochemical cell component of any one of claims 1 to 8, wherein the electrochemical cell component has a resistivity less than a resistivity of a system comprising a gas diffusion layer that is not welded to a plate.
10. An electrochemical cell component of any one of claims 1 to 8, wherein the surface of the separator plate comprises open flow field channels and the gas diffusion layer does not sink into the open flow field channels.
11. An electrochemical cell comprising the cell component of any one of claims 1-10.
12. An electrochemical cell stack comprising a plurality of the electrochemical cells of claim 11.